

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
6 October 2005 (06.10.2005)

PCT

(10) International Publication Number  
**WO 2005/093132 A1**

(51) International Patent Classification<sup>7</sup>: C25D 3/22, 3/58

(21) International Application Number:  
PCT/US2005/006379

(22) International Filing Date: 28 February 2005 (28.02.2005)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
60/550,167 4 March 2004 (04.03.2004) US

(71) Applicant (for all designated States except US):  
TASKEM, INC. [US/US]; 4639 Van Epps Road, Brooklyn  
Heights, OH 44131 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): ECKLES, William,

E. [US/US]; 2603 Princeton Road, Cleveland Heights, OH  
44118 (US). KUEHLER, Thorsten [DE/DE]; Westerfeld-  
strasse 50h, 33611 Bielefeld (DE).

(74) Agent: SUTKUS, Richard, A.; Tarolli, Sundheim, Cov-  
ell & Tummino L.L.P., 526 Superior Avenue, Suite 1111,  
Cleveland, OH 44114 (US).

(81) Designated States (unless otherwise indicated, for every  
kind of national protection available): AE, AG, AL, AM,  
AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN,  
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI,  
GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE,  
KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD,  
MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG,  
PI, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ,  
TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA,  
ZM, ZW.

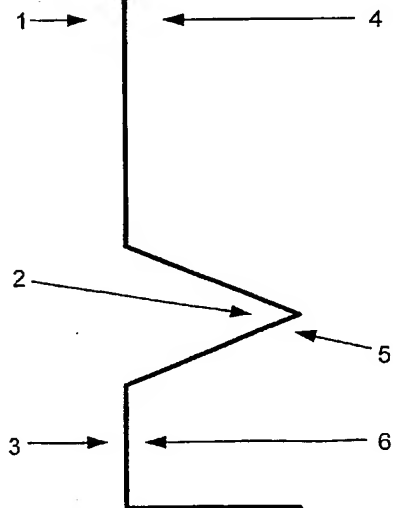
(84) Designated States (unless otherwise indicated, for every  
kind of regional protection available): ARIPO (BW, GH,

[Continued on next page]

(54) Title: POLYAMINE BRIGHTENING AGENT

Anode

"Jiggle Panel"



Measurement Points

(57) Abstract: A zinc electroplating bath includes  
zinc ions and a brightening agent. The brightening  
agent is a polyamine or a mixture of polyamines that  
include a quaternary ammonium group.

WO 2005/093132 A1



GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

— with amended claims

*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*

**Declaration under Rule 4.17:**

— of inventorship (Rule 4.17(iv)) for US only

**Published:**

— with international search report